



Figure 1A

1 CCACGCGTCCGATAATTACTAAGTACAGGGTCCCAAATTAGAATCTATTCCAACCTTAAAG 60  
 61 GACAAGAAAAAAGTCCAAGATTACCCAGTGAAGTATGTTTGTAGTTTGTGTACACAA 120  
 121 ACTGATAGTCACGCCTAATTTCTTCTTATACTCCATAAAAGACAGTGTGTATGTATGTGT 180  
 181 GTGTGTTTCTTTGTGTGTATGTATGTTTACAGGTATATGTGTATAGCCTTAGCTAGGAGA 240  
 241 CAATTCTAGTTTATCTAAAGGCTTATTTGAGCCCTTTCTCACGTTCAATTTATTTTATTTA 300  
 301 ATAAGCATTATATATCAGGTATTATTCAAAGCTCTTTAGAAATCTTTAGACATATTAACC 360  
 361 CATATAATTCTCTTCTCTATAGGGAATAGATATGATTATTATTGCTATTTTATGGATGAT 420  
 421 GAAGCTTTCTAAACATGTTATAGCCAGTAAGTGTACTATTCTCTCATTCCTATCTCTGT 480  
 481 TCTATCTTGTTCCTCCAGATAATGTGATACTATGTGGAGGTTTCTGACCACAGAGAATGT 540  
 1 M S 2  
 541 CCAGCACTCTTGGCCACAACATGGAATCTCCTCATCACACTGATGTTGACCCTTCTGTCT 600  
 3 S T L G H N M E S P H H T D V D P S V F 22  
 601 TCTTCCTCCTGGGCATCCCAGGTCTGGAACAATTTCAATTTGTGGCTCTCACTCCCTGTGT 660  
 23 F L L G I P G L E Q F H L W L S L P V 42  
 661 GTGGCTTAGGCACAGCCACAATTGTGGGCAATATAACTATTCTGGTTGTTGTTGCCACTG 720  
 43 G L G T A T I V G N I T I L V V V A T E 62  
 721 AACCAGTCTTGCACAAGCCTGTGTACCTTTTTCTGTGCATGCTCTCAACCATCGACTTGG 780  
 63 P V L H K P V Y L F L M L S T I D L A 82  
 781 CTGCCTCTGTCTCCACAGTTCCCAAGCTACTGGCTATCTTCTGGTGTGGAGCCGGACATA 840  
 83 A S V S T V P K L L A I F W C G A G H I 102  
 841 TATCTGCCTCTGCCTGCCTGGCACATATGTTCTTCATTCATGCCTTCTGCATGATGGAGT 900  
 103 S A S A L A H M F F I H A F C M M E S 122  
 901 CCACTGTGCTACTGGCCATGGCCTTTGATCGCTACGTGGCCATCTGCCACCCACTCCGCT 960  
 123 T V L L A M A F D R Y V A I H P L R Y 142  
 961 ATGCCACAATCCTCACTGACACCATCATTGCCACATAGGGGTGGCAGCTGTAGTGCGAG 1020  
 143 A T I L T D T I I A H I G V A A V V R G 162

**Figure 1B**

1021	GCTCCCCTGCTCATGCTCCCATGTCCCCTTC	1080
163	<u>S L L M L P C P F F I G R L N F C Q S H</u>	182
1081	ATGTGATCCTACACACGTACTGTGAGCACATGGCTGTGGTGAAGCTGGCCTGTGGAGACA	1140
183	V I L H T Y  E H M A V V K L A C G D T	202
1141	CCAGGCCTAACCGTGTGTATGGGCTGACAGCTGCACCTGTTGGTCAATTGGGGTTGACTTGT	1200
203	R P N R V Y G L T <u>A A L L V I G V D L F</u>	222
1201	TTTGCATTGGTCTCTCCTATGCCCTAATTGCACAAGCTGTCTTCGCCTCTCATCCCATG	1260
223	<u>C I G L S Y A L I A Q A V L</u> R L S S H E	242
1261	AAGCTCGGTCCAAGGCCCTAGGGACCTGTGGTTCCCATGTCTGTGTCATCCTCATCTCTT	1320
243	A R S K <u>A L G T</u>  G S H V C V I L I S Y	262
1321	ATACACCAGCCCTCTTCTCCTTTTTTACACACCGCTTTGGCCATCACGTTCCAGTCCATA	1380
263	<u>T P A L F S F F T</u> H R F G H H <u>V P V H I</u>	282
1381	TTCACATTCTTTTGCCCAATGTTTATCTGCTTTTGCCACCTGCTCTTAATCCTGTGGTAT	1440
283	<u>H I L L A N V Y L L L P P A L N P V V Y</u>	302
1441	ATGGAGTTAAGACCAAACAGATCCGTAAAAGAGTTGTCAGGGTGTTTCAAAGTGGGCAGG	1500
303	<u>G V</u> K T K Q I R K R V V R V F Q S G Q G	322
1501	GAATGGGCATCAAGGCATCTGAGTGACCCTGGAGTATAGAGGGACTTAATCCAAAAAAAAA	1560
323	M G I K A S E	329
1561	AAAAAAA 1567	

RA1c\_GPCR ~~~~~MSSCNFTHA...TFMLIGIPGLEBAHFWFGEFPLLSMYAVALFGNCIVAFIVR  
prostate\_GPCR ~~~~~MSSCNFTHA...TFVLLGIPGLEKAHFWGFPLLSMYVVAFFGNCIVAFIVR  
HGPRBMY25 MSSTLGHNMESPHHTIDVDPVSFLLGIPGLEQFHLLWSLPLVCGIGTATIVGNITILVVA  
HOR\_GPCR MSDS...NLSDNHL...PDTEFLTIGIPGLEAAHFWIAIPFCAMYLVALVGNAAILLVVA  
MOR\_GPCR ~~~~~MAGNATH.HIASFFLVGIPGLENFHCWIGLIPVCLLPALTLGNSTILLTVK

RA1c\_GPCR TERSLHAPMYFLCMLAAIDLALSTSTMPKILALFWFDSREIIFDCLAQOMFFIHAI  
prostate\_GPCR TERSLHAPMYFLCMLAAIDLALSTSTMPKILALFWFDSREISFEACTOMFFIHAI  
HGPRBMY25 TEPVLHKPYYFLCMLSTIDLAASVSTVPKILALFWCGAGHISASACLAHMFFIHAFCM  
HOR\_GPCR MDNALHAPMYFLCLSLSLDLSSTVPKILAILLHAGEISFGCCLAQMFCHSIIYAL  
MOR\_GPCR LEPSLHQPMYFLCMLAMNDMLCTSTALKMLCIFWFDEHWINFDACTOMFFIHAI

RA1c\_GPCR ESTILLAMAFDRYVAICHPLRHAAVLNNTVTVOIGMVALVRGSLFFFELPLLIKRLAFCH  
prostate\_GPCR ESTILLAMAFDRYVAICHPLRHAAVLNNTVTVOIGIVAVVRGSLFFFELPLLIKRLAFCH  
HGPRBMY25 ESTILLAMAFDRYVAICHPLRYAILTDTLTAHIGVAAVVRGSLMLPCFFIGRLNFCQ  
HOR\_GPCR ESSILLAMAFDRYVAICNPLRYTTLNLHAYIGRIGFVLFERSVAISSEFIFLLRLPYCG  
MOR\_GPCR ESAILMAMAFDRYVAICIPLHYTSLTTPMVIKIGVGLCRAILMTMPCPLLIKRLLYT

RA1c\_GPCR SNVLSHSYCVHQDVMKLAYTDTLPNVVYGLTALLVMGVDVMFISLSYFLIIRAVLQLPS  
prostate\_GPCR SNVLSHSYCVHQDVMKLAYDTPLPNVVYGLTALLVMGVDVMFISLSYFLIIRTVLQLPS  
HGPRBMY25 SHVLHHTYCEHMAVVKLACDTRPNRVYGLTAALLVGVDFCIGLSYALIAQAVIRLSS  
HOR\_GPCR HRVHTHTYCEHMAVVKLACANITVNTVYGLTVALLAMGDSILIAISYGFILHAVFHPLS  
MOR\_GPCR KYVHTHTYCEHMAVVKMASGNTOVNRVYGLLVALSVTITFDGLIVTSYIKILQAVFRLSS

RA1c\_GPCR KSERAKAFGTCVSHIGVLAIFYVPLIGLSVHRFGNSLDPI.VHVTMGDVIYLLLPVIVNP  
prostate\_GPCR KSERAKAFGTCVSHIGVLAIFYVPLIGLSVHRFGNSLHPI.VRVVMGDIYLLLPVIVNP  
HGPRBMY25 HEARSKALGTCGSHVCVILISYTPALFSFETHRFGHH.VPWHIHLILANVYLLLPVIVNP  
HOR\_GPCR HDAQHKAISTCGSHIGILIFYIPAFFSTETHRFGHHVEBKHVHIFILANVYLLLPVIVNP  
MOR\_GPCR QNARSKALGTCVAHVCTILAFYTPALFSFETHRFGKN.VBASIHIFAILYLLLPVIVNP

RA1c\_GPCR IITYGAKTKQIRIRVLAMFKISCDKDIETAGGNT  
prostate\_GPCR IITYGAKTKQIRIRVLAMFKISCDKDIQAVGGK~  
HGPRBMY25 VVYGVKTKQIRKRVVRVFSQSGGMGIKASE~~~  
HOR\_GPCR IITYGAKTKEIRSRRLKLHLHGK.TSI~~~~~  
MOR\_GPCR IITYGAKTKQIRDRVVSILFSQKQK~~~~~

Figure 3

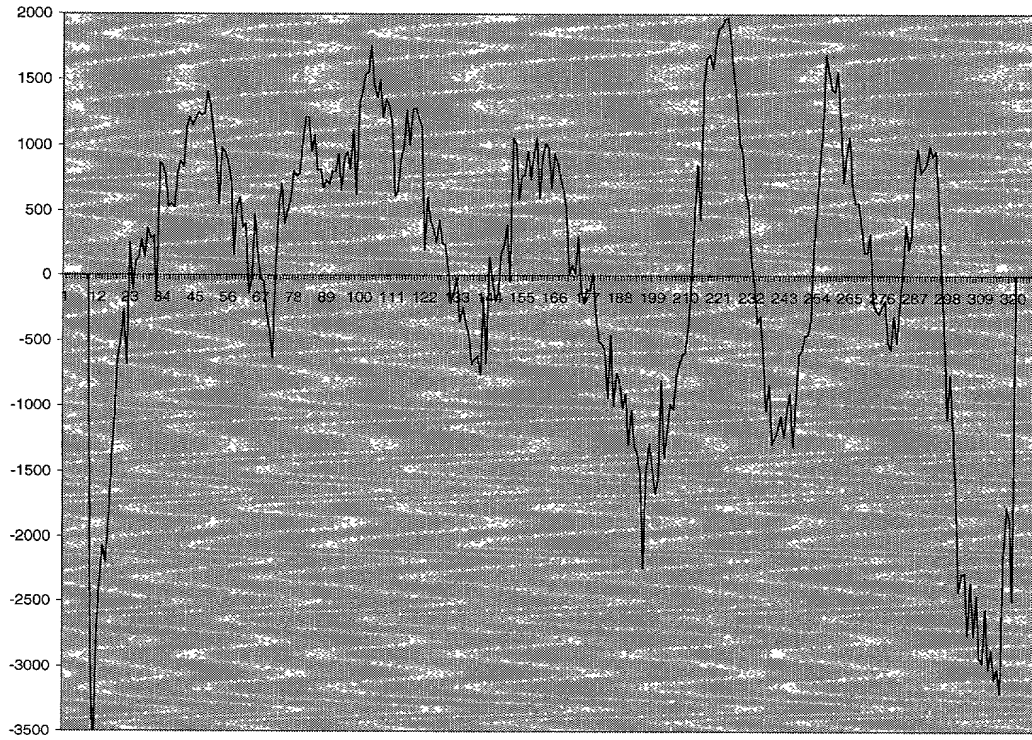


Figure 4

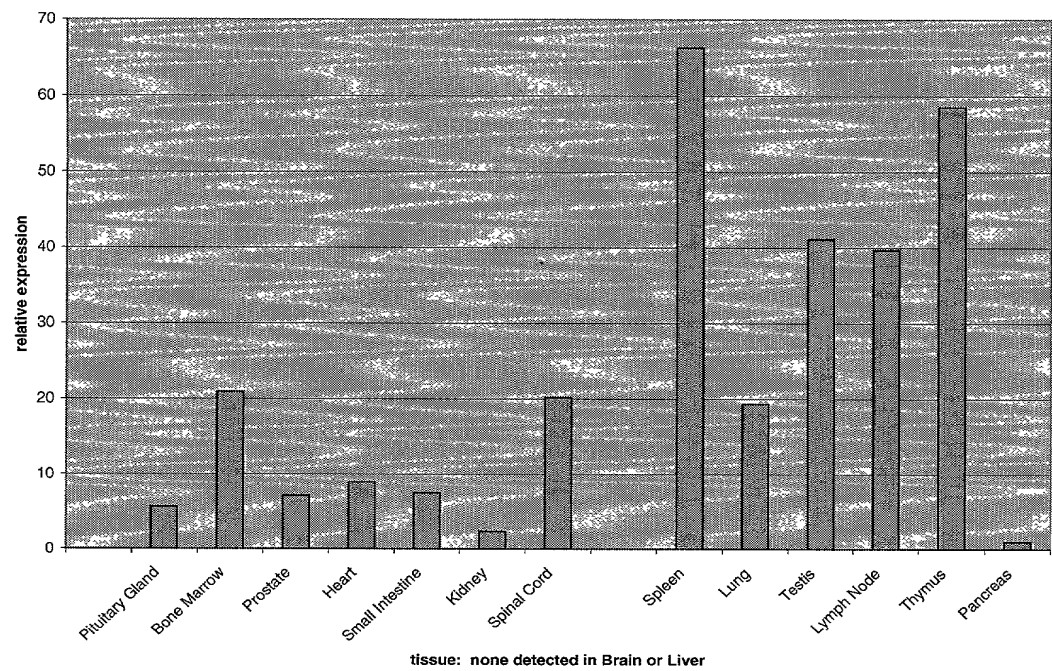


Figure 5.

<u>Protein</u>	<u>Genbank ID</u>	<u>Identities</u>	<u>Similarities</u>
rat G-protein coupled receptor, RA1c protein	gil3420759	52.83%	59.75%
human prostate specific G-protein coupled receptor, PSGR protein	gil11875778	51.89%	59.12%
human HOR 5'Beta14 protein	gil11908211	51.58%	60.76%
mouse MOR 3'Beta5 protein	gil11908222	54.95%	60.38%

Figure 6

